Butterflies at Cortina in June, 1924.

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In June, 1924, the three of us visited Cortina and collected butter-flies in the neighbourhood. Unfortunately the weather was far from ideal and two spells of soaking rain from June 12-14th and from June 20th-23rd did much to delay the emergence of species. Our departure on the 24th, coincided with the incidence of a spell of really hot days. Too late, alas! The general rule was fine mornings with dull windy aftermoons. The inhabitants told us that June was always an uncertain month. However, the fine days or portions of days that we enjoyed were sufficient to give more than a glimpse of the possibilities of the insect fauna. The luxuriance and freshness of the vegetation after a prolonged winter did much to enhance the beauty of the scenery and may have been responsible for the generous size of many of the

commoner species of butterflies.

Cortina itself is situated in the heart of the Dolomites at an altitude of 4000 ft: it lies in a wide open valley watered by a river, the Boite, which flows north and south. The general trend of the valley is the line of the river, but it is also open to the east where it slopes gradually up to the Tre Croci pass (alt. 5500ft.) and to the west by a steep gap which leads to the Falzarego. Elsewhere the valley is surrounded by lofty mountains. Collecting grounds on slopes and meadows abound on all sides. A narrow gauge railway runs northwards to Schluderbach and Toblach (now renamed Carbonin and Dobbiacco) and southwards to Pieve di Cadore. This places somewhat inaccessible spots within easy reach of the visitor at Cortina. To the north it takes us to the somewhat gloomy pine clad mountains, which are the haunt of Melitaea maturna. Brenthis there and Polyaumatus (Vaccinina) optilete, and to the south to Pieve and the Cadore Dolomites, where the scenery begins to assume a more Italian aspect.

Our favourite collecting grounds were.

(1) The meadows surrounding Cortina.

(2) The river banks northwards as far as Fiammes, the next stopping place on the railway.

(3) A rough stony area near the river south of Cortina sparsely

covered with grass, flowers and dwarf willows.

(4) A patch of sloping Dolomite Scree, with trees and shrubs and meadows at Borca facing south. Borca is on the railway about 10 miles south of Cortina.

(5) A rough escarpment at Pieve di Cadore leading down to the River Pieve like an undercliff with meadows and marsh and woodland.

Insects here were a fortnight in advance of these at Cortina.

Our visit was too early for the Erebias for which the district is, I believe, justly famous. Well-known localities are the Falzarego and the Croda di Lago. Less accessible but no less promising I should expect to find the Val Travenanze of botanical fame. Who knows what rare and local species may wait to be discovered in the treasure house of this beautiful ravine.

Species taken or observed were as follows:-

Papilio machaon.—Not very common except among the pine trees June 15th, 1925.

near the little station at Fiammes. There it was always to be found in abundance.

Papilio podalirius.—A few worn specimens were taken at Pieve di Cadore.

Parnassins apollo.—Locally common at Borca; all taken were 3's and of large size spanning upwards of 80mm. The species in other places was widely distributed but scarce.

Aporia crataegi.—Fairly common.

Pieris brassicae. - Abundant everywhere.

Pieris rapae. - Fairly common.

Pieris napi.—Abundant from Cortina up to an altitude of 7,000ft. All taken were var. bryoniae. The 3s with the nervures strongly marked and the 2s of every degree of duskiness.

Pontia callidice.—Fresh and abundant at the top of the Falzarego Pass on June 20th. A stream was meandering through one of the alpine meadows and this was bordered along its course by a stretch of white stones. Here callidice was flying close to the ground in myriads, whereas the 'whites' flying over the grass were found in nearly all instances to be *P. napi*. The specimens taken were finely marked and large in size. The 3 s up to 50mm. Only two \$\mathbb{c}\$ s were taken.

Euchloë (Anthochavis) cardamines.—Common.

Leptosia sinapis.—Common.

Gonepteryx rhamni.—Common.

Colias croceus (edusa).—Very scarce.

Colias hyale. — Abundant everywhere.

Limenitis rurularis (camilla).—A freshly emerged specimen was seen at Pieve on June 18th, and a pupa was found at Borca. The foodplant, the alpine honeysuckle, is common in the neighbourhood of Cortina.

Aglais urticae. - Common everywhere.

Pyrameis atalanta, P. cardni and Vanessa io were seen occasionally. Euranessa antiopa.—A few worn hibernated examples were seen along the river and a prolonged search was at length rewarded by the discovery of a newly hatched brood of larvae on a sallow bush on the bank near Fiannmes. These fed up very rapidly and produced imagines in August.

Eugonia polychloros.—A brood of half fed larvae was found on a sallow at Pieve. The imagines that resulted were very deeply coloured.

Aryunis aglaia.—The 3 s were just emerging at Pieve on June

18th.

Argynnis niobe var. eris.—One fresh 3 taken at Pieve on June 18th

Issoria lathonia,—Not common.

Brenthis euphrosyne.—Abundant everywhere.

Brenthis thore.—Very local, 5 were taken at one spot near the river bank at Fiammes in a clearing among the pine trees. The first specimen was taken on June 13th, and the last on June 17th. The most diligent search in the neighbourhood failed to discover any others.

Brenthis amathusia.—Just emerging on June 21st, when it was fairly abundant and widely distributed. The specimens taken are all 3s and large. 50mm., nearly as big as my 2s from Switzerland. The black markings predominate and the row of black spots in the

hindwing, upper surface is most instances are joined to the marginal black △s.

Brenthis pules.—Began to appear at suitable spots at about 5,000ft. from June 16th. First seen in a sheltered meadow near the road from Schluderbach to Misnrina. It was not out at the summit of the Falzarego on June 20th, but the turf there was swarming with nearly full fed larvae. I collected some of these and bred a few typical specimens. None of the larvae taken were ichneumoned so the number of imagines at this spot during July and August must have been amazing. Why, one sat on 50 larvae at a time! all rushing about in the sun in a tremendous hurry.

Melitara aurinia.—One only taken at Pieve on June 18th. It is a

fresh 3 small, corresponding, I think, to var. artemis.

Melitaea maturna.—Fine and locally abundant among the clearings in pine woods and on the roads from Schluderbach to Misurina and from Schluderbach to Col Rosa. Not met with in the immediate neighbourhood of Cortina.

Melitaea didyma.—A few larvae were taken at Cortina. These produced typical specimens in July.

Melitaea athalia.—Not commonly met with. First met with on June 13th. It appeared to be widely distributed, but I do not think that it was properly out by the time we left.

Melitaca dictynua.—The commonest of the genus in June. First taken by the river on June 8th, afterwards it turned up in good numbers nearly everywhere. Specimens are of a good size. My largest ? spans 43mm, and my smallest 3 37mm.

Melitaea aurelia.—I have two specimens of a small Melitaea that I believe to belong to this species. They are certainly not parthenie. They are both 3 s and span 31mm. One was taken at Borca on June 14th, and the other near Cortina. They probably belong to var. rhaetica as the black markings are narrow.

Hamearis (Nemeobius) lucina.—Scarce. Two 2 s and one 3 were taken at Pieve on June 11th. The 2 s are remarkable for the darkness of the ground colour upper surface hindwings and the lightness of the streaks, which are white instead of fulvous.

Ruralis betulae.— Larvae beaten from sloe at Borca produced typical imagines in August.

Strymon (Thecla) spini.—Four fresh specimens were taken at Pieve on June 18th. They were fond of settling on the leaves of the Acacia trees.

Callophrys rubi.—A few worn at Cortina.

Heodes dorilis.—The only species of the family that we encountered. Along the banks of the Boite a few β s were occasionally met with. They are large and of a unicolorous deep sepia, race subalpina.

Polyommatus semiargus (acis).—Common everywhere. Large and

brightly coloured.

Glaucopsyche cyllarus.—A few worn 3 s and one fresh 2 taken at Cortina. The latter was entirely brown on the upper surface. ab. audereggii.

Cupido minima .-- Abundant.

Lycaena arion .- Very common in all meadows around Cortina

especially in the neighbourhood of streams. Varies from type to ab. semiobscura. Size from 35-42mm.

Polyommatus amandus.—Common in the meadows of Cortina and in the rough patch along the river south of the village. First appeared on June 17th. My largest 3 spans 37mm. The 9 is brown with very faint orange lunules upper surface, hindwing.

Polyommatus icarus.—Generally abundant, chiefly remarkable for the depth of ground colour in the ?s. One beautiful specimen is almost black with faintly marked orange lunules edged with blue. The

3 s are large spanning up to 35mm.

Polyoumatus hylas.—Only met with at Pieve, where it was fairly common. All specimens are very boldly spotted on the underside.

Polyommatus (Agriades) thetis.—Very common around Cortina. The 2 s are very distinctive. These possess no blue on the upper surface but the orange lunules are remarkably large. In some examples these lunules on the hindwings under surface appear as large vermilion blotches.

Polyommatus (Agriades) covidon var. covydonius.—One specimen of this beautiful variety was taken at Pieve on June 18th. The type covidon was not seen.

Polyonmatus (Vacciniina) optilete,—Locally common near Fiammes. First taken on June 17th. Fond of damp places on sunny roads. Its foodplant vaccinium is common in the neighbourhood. All taken were \mathcal{Z} s.

Plebeins argus.—Very abundant on stony area along the river. A fine large race: the $\mathfrak T$ s without any blue and with conspicuous lunules. The largest $\mathfrak T$ spans 34mm, the largest $\mathfrak T$ 33mm. Not met with elsewhere except by Major Twigg at Longarone, this type was very similar to that found at Cortina.

Plebeius aegon.—Only met with at Pieve where it was very abundant. The 2s small without blue, the 3s variable in size with very wide black border to the wings.

*Plebeius (Aricia) medon.—Fairly common in most localities.

Plebeius (Albulina) pheretes.—One fresh 3 taken on the Falzarego on June 20th.

Scolitantides orion.—This interesting species, of which only 4 were taken, was, apparently, widely distributed. The first example was taken at Borca on June 14th. Two were taken on the same sun-baked bank near Fiammes and one at Pieve. These 3 places are 10 miles apart from each other. The examples taken are well marked with blue.

Coenonympha pamphilus.—Was generally common especially on marsby ground. A distinctive feature is the under surface hindwings which are almost without markings and of a dull fawn colour.

Coenonympha arcania.—An interesting species which, in one of its many forms, was common everywhere. Var. darwiniana swarmed in the Cortina meadows. A magnificent form of the type was abundant at Pieve and at Borca midway in distance and altitude between the two places, both the type and variety were flying together. Here however the variety was of large size and only distinguishable by the dullness of the dark markings on the upper surface and the arrangements of the spots within the white band in the under surface hindwings. The largest 2 from Borca spans 40mm, and the largest 3 from Pieve spans the same.

Melanargia galathea.—Magnificent, fresh examples of var. procida were taken by Major Twigg at Longarone on June 11th. The species was not out at Cortina when we left.

Pararye maera.—Generally common. Fine dark specimens. The males in most instances possessed of a large apical eyespot with one pupil. The 2 s were grand creatures with a bi-pupillated eyespot and a small eye in the next interneural space above. They span up to 57mm.

Pararge hiera.—Common but worn at Cortina as soon as the pines are reached but fresh at Tre Croci at the beginning of June. The largest 2 spans 45mm, and the smallest 3 38mm. There is considerable variation in the spots.

Pararge achine. One 3 was taken at Pieve on June 18th.

Pararye aegeria race egerides.—Occasionally seen but not common. Epinephele jurtina.—Not emerged at Cortina when we left. One taken by Major Twigg at Borca on June 23rd.

Erebia medusa.—Immensely common everywhere around Cortina during our stay. Reminded one of E. jurtina in the meadows in England. The majority taken are poorly spotted and correspond with var. hippomedusa.

Erebia lappona.—Abundant on grassy slopes over 5,500ft. First met with at Tre Croci in June 10th, just emerging on a steep grassy bank facing north. Fine large specimens with the 3s spanning up to 45 mm. Transverse lines on under surface hindwings are in most cases well marked.

The black and white skippers were well represented and, although I do not profess to much skill in differentiating species and varieties in this difficult group, I think that the following particulars as far as they go are correct.

Hesperia malvas.—Generally distributed. The dark markings undersurface hindwings are greenish gray.

Hesperia sao. - Well distributed and typical.

Hesperia alreus.—Very common and fresh at Borca on June 14th. A large form spanning up to 33mm. I have one specimen from Longarone and one from Cortina, but it was not common at the latter place.

Hesperia serratulae.—Very abundant in the Cortina meadows with considerable variation in the number and size of the spots on the upper

surface of the forewings.

Hesperia cacaliae.—Several fresh specimens were taken in the alpine meadows at the summit of the Falzarego Pass on June 20th.

Nisoniades tages.—Common in the district.

Angiades sylvanus.—Common in the district.

Adopea lineola —One fine specimen of var. ludoviciae was taken by

Major Twigg at Longarone on June 11th.

Cyclopides palaemon.—This interesting butterfly was widely spread along the river bank near Fiammes and was also taken in a very restricted locality at Borca. Specimens varied greatly in size 24-31mm.

72 species in all.